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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/458,300	12/10/1999	THOMAS L. MCMAHON	MS1-365US	8699

22801 7590 08/04/2004

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EXAMINER

SENF, BEHROOZ M

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/458,300

Applicant(s)

MCMAHON, THOMAS L.

Examiner

Behrooz Senfi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-81 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Response to Arguments

1. Applicant's amendment and arguments (paper no. 7, filed 8/28/2002) with respect to claims 1 – 7, 12 – 19, 21 – 30, 33, 36 – 40, 42 – 54 and 70 - 81 have been fully considered but are moot in view of the new ground(s) of rejection.

Applicant's Amendment and explanation (paper no. 7, filed 8/28/2002) In regards to 112, second paragraph rejection of claims 8 - 11 have been fully considered and are persuasive. Therefore examiner withdraws the 112 rejections.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 3, 13 – 23, 26 – 30, 35 – 42, 46 – 55, 58 – 59, 61 – 65 and 68 – 81, are rejected under 35 U.S.C. 102(e) as being anticipated by Chiang et al (US 6,553,072).

Regarding claims 1 and 70, Chiang '072 discloses the claimed "encoding a source image/layered encoding" (i.e. fig. 1, abstract), and "generating a base layer representing a low-resolution portion of the source image, and generating

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an enhancement layer representing a high-resolution portion of the source image" (i.e. fig. 1, col. 2, lines 64 – col. 3, lines 10), and the claimed "base layer and enhancement layer each has an associated aspect ratio" is an inherent features, each base and enhancement layer would have an associated aspect ratio, and the claimed "the aspect ratio associated with the enhancement layer differs from the aspect ratio associated with the base layer" reads on (i.e. col. 2, lines 65 "enhancement layer data accommodates different frame sizes" – col. 3, lines 10).

Regarding claims 2 - 3, 22 – 23, 37 – 38, 51 – 52 and 71 – 72, the claimed "wherein the aspect ratio associated with the base layer corresponds to an aspect ratio associated with low-resolution television" and "aspect ratio associated with the enhancement layer corresponds to an aspect ratio associated with high-resolution television" reads on (col. 3, lines 1 – 5).

Regarding claims 21, 50, 65 and 73, the limitations claimed are substantially similar to claim 1, and are the reverse process (decoding), therefore the ground for rejecting claim 1 also applies here with respect to (i.e. fig. 1, decoding process 105).

Regarding claims 13 – 15, 29, 46 – 48, 61, 62 and 76, the claimed "combining base layer and enhancement layer into a single transport stream" reads on (i.e. fig. 1, the output stream of 110), and "transmitting only the base layer to decoder" (i.e. fig. 5).

Regarding claims 16 – 17 and 39 - 40, the limitations claimed "transmitting the base layer to an image decoding system using a first transmission medium

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and transmitting the enhancement layer to the image decoding using second transmission medium” and the “transmission format in claim 17” reads on (i.e. fig. 6, transmission of SDTV (base layer) and HDTV (enhancement layer) enhancement layer, and formatter).

Regarding claims 18 – 20, 35, 41, 49 and 63 - 64, Chiang '072 discloses the claimed “storing the base layer and enhancement layer” (i.e. fig. 1, encoder 135 and 125), and “computer program that is executable by a processor” reads on (col. 13, lines 2 – 5, microprocessor would include memories”.

Regarding claims 26 – 28 and 58 – 59, the claimed “first layer is a base layer and second layer is an enhancement layer,” reads on (i.e. fig. 1, base and enhancement layers), and “communicating the first layer to a low-resolution television and” (i.e. fig. 5).

Regarding claims 30, 53, 68, 69 and 74 - 75, the claimed “wherein the method is executed by a television” reads on the fact that the HDTV and SDTV data are suitable for further processing and display on a high-resolution or standard resolution television (i.e. col. 10, lines 55 – 58), (col. 5, lines 45+).

Regarding claims 36, 42 and 54, the limitations claimed are substantially similar to claim 1; therefore the grounds for rejecting claim 1 also applies here. Furthermore, as for the additional limitation “transmission of the base and enhancement data”, please see (fig. 1, formatter 110, 115) and “receiver for receiving the base layer decoder and the enhancement layer decoder in claim 54” (i.e. fig. 1, 180).

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Regarding claim 55, the limitations claimed is substantially similar to claim 20; therefore the grounds for rejecting claim 20 also apply here.

Regarding claim 77 - 81, the limitation as claimed "enhancement layer contains only the high resolution portion of the source image" reads on (i.e. fig. 7), and "wherein both the first and the second layer are used to generate high resolution image data" (i.e. col. 5, lines 45+).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 – 5, 7 – 9, 24, 25, 45, 56, 57, 60, 66 and 67, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang '072.

Regarding claims 4 – 5, Chiang '072 fails to explicitly teach the aspect ratio of "4:3" and "16:9". However Chiang '072 teaches, base and enhancement layers having different aspect ration/resolution" (i.e. col. 2, lines 65 "enhancement layer data accommodates different frame sizes" – col. 3, lines 10), and also teaches that the disclosed system can be readily extended by one skilled in the art to other/different video data resolution as desired (col. 3, lines 14 – 17), therefore it makes the limitation obvious to one skilled in the art at the time of the invention was made.

Regarding claims 7 - 8, Chiang '072 teaches, "generating an

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Enhancement Layer" (i.e. fig. 1, col. 2, lines 64 – 66) and also (col. 5, lines 47 – 50) teaches that the high-resolution enhancement layer may be derived from the combination (adding) of encoded base layer and encode enhancement layer. Which in other words makes the limitation subtracting the base layer from the source image (high resolution enhancement) to derive the enhancement layer obvious to one skilled in the art at the time of the invention was made. Furthermore, the prior art of the record Morrison et al (two-layer video coding for ATM networks), (i.e. fig. 3, enhancement layer) also teaches generating the enhancement layer by subtracting the base layer from the input signal.

Regarding claim 9, the claimed "wherein the aspect ratio associated with the enhancement layer corresponds to an aspect ratio associated with high-resolution television" reads on (col. 3, lines 1 – 5).

Regarding claims 45 and 60, the limitations claimed are substantially similar to claims 7 – 8; therefore the ground for rejecting claims 7 – 8 also applies here.

Regarding claims 24 – 25, 56 – 57 and 66 – 67, the limitations claimed are substantially similar to claims 4 – 5, therefore the ground for rejecting claims 4 – 5 also applies here.

6. Claims 6, 12, 43 and 44, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang '072 as applied to claims 1 in view of Gharavi (US 5,253,058).

Regarding claim 6, Chiang '072 teaches down-sampling the image to

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generate a lower resolution signal/image (i.e. fig. 1, 140). Chiang '072 fails to explicitly teach that down sampling is done through the use of a low-pass filter, for reducing the resolution of the input signal. However, such features are well known and used in the prior art of the record as evidenced by Gharavi '058 (i.e. fig. 1, low-pass filter 102). Taking the combined teaching of Chiang '072 and Gharavi '058, as a whole would make the limitation using a "low-pass filter for reducing the resolution of the input signal" obvious to one skilled in the art at the time of the invention was made.

Regarding claim 12, combination of Chiang '072 and Gharavi '058 teaches the "high-pass filtering" (i.e. col. 5, lines 48 – 50 of Gharavi).

Regarding claims 43 – 44, the limitations claimed are substantially similar to claims 6 and 12; therefore, the ground for rejecting claims 6 and 12 also applies here.

7. Claims 10, 11, 33 and 34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang '072 as applied to claims 1 in view of Yagasaki et al (US 6,414,991).

Regarding claim 33, Chiang '072 teaches the claimed "decoding a base Layer representing a low-resolution portion of a source image " (i.e. fig. 1, decoding portion of the image). Chiang fails to explicitly teach that the "first layer is received at a first time and the second layer is received at a second time". However, such features are well known and used in the prior art of the record as evidenced by Yagasaki '991 (i.e. figs. 5 and 15, time-base multiplexer, col. 14, lines 40+, temporal scalability). Therefore, taking the combined teaching of

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Chiang '072 and Yagasaki '991 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to use the teaching of Yagasaki '991 and modify the encoding and decoding system of Chiang '072 to improve the encoding efficiency.

Regarding claim 34, combination of Chiang '072 and Yagasaki '991 teaches the claimed "first media and second media (receiving data from different media)" (i.e. col. 9, lines 5+ of Yagasaki).

Regarding claims 10 – 11, combination of Chiang '072 and Yagasaki '991 teaches the claimed "offset value" (i.e. fig. 5, FPOS of Yagasaki).

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang '072 as applied to claims 1 in view of Bendinelli et al (US 6,061,719).

Regarding claim 31, Chiang '072 teaches the "reverse processing of the layers as discussed above". Chiang '072 fails to explicitly teach the claimed "first layer is decoded from a physical medium and the second layer is decoded from a received data stream". However such features are well known and used in the prior art of the record as evidenced by Bendinelli '719 (i.e. fig. 3, col. 2, lines 50 – 60) wherein teaches the receiver capable of receiving and decoding the data from different sources and displaying. Therefore, taking the combined teaching of Chiang '072 and Bendinelli '719 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to modify and improve the receiver system of Chiang with the techniques as taught by Bendinelli '719, which would make the system capable of presenting different media in conjunction with television programming to the viewers.

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9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang '072 as applied to claims 1 in view of Dewald (US 6,317,171).

Regarding claim 32, Chiang '072 teaches the claimed "decoding a base Layer representing a low-resolution portion of a source image" (i.e. fig. 1, decoding portion of the image). Chiang fails to explicitly teach the claimed "anamorphic squeeze". However such features are well known and used in the prior art of the record as evidenced by Dewald '171 (i.e. abstract, lines 8 – 11), wherein teaches generating an image that is anamorphically squeezed in the horizontal dimension. Therefore it makes the limitation "anamorphic squeeze of an image" obvious to one skilled in the art at the time of the invention was made, which would widens the image (in the horizontal dimension) while the viewer perceives a normal wide screen image on the screen (col. 4, lines 21 – 32).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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Or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121


Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

7/29/2004


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
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